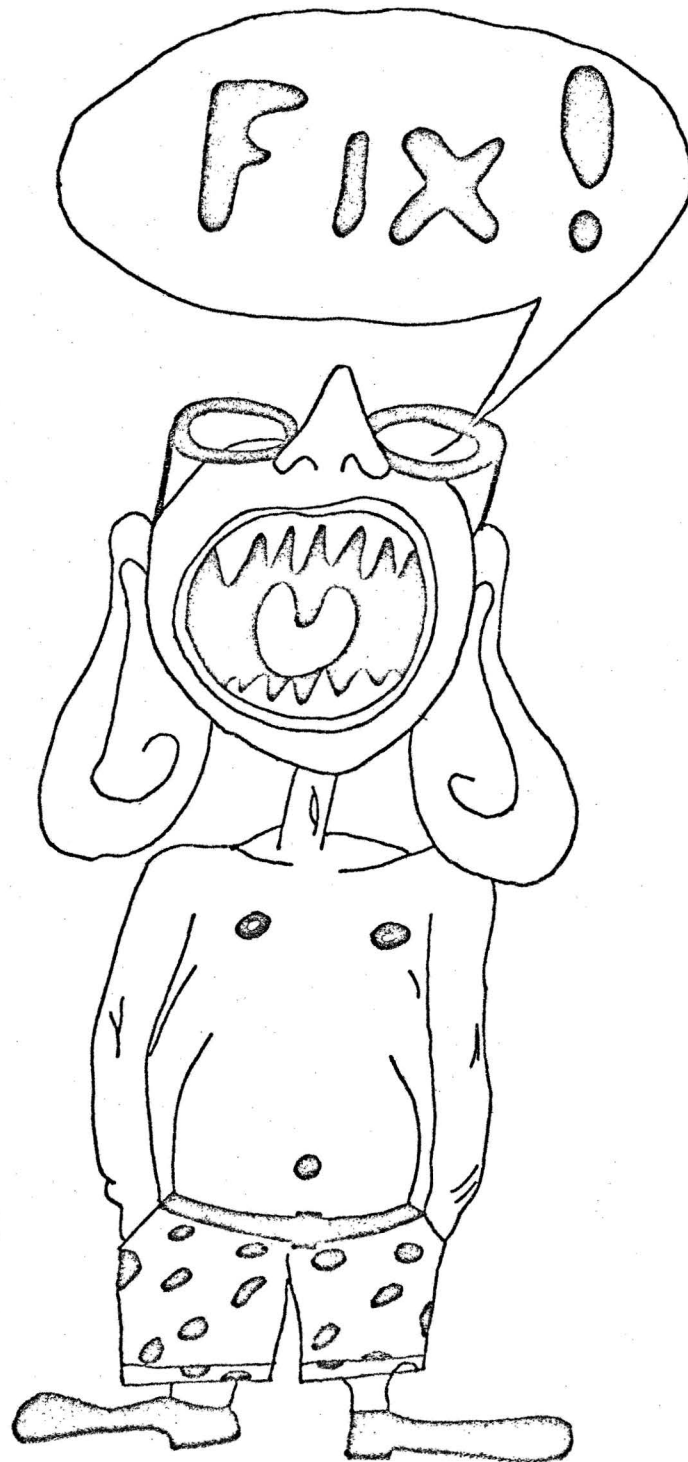
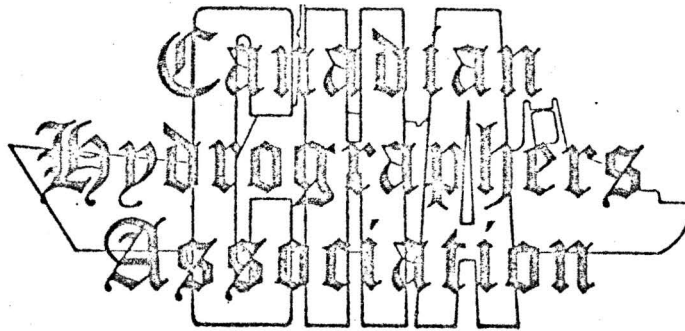


CANADIAN HYDROGRAPERS ASSOCIATION

NEWSLETTER NO. 3
JANUARY, 1970





NEWSLETTER NO. 3 - JANUARY 1970

Two thousand years ago, three wise men came from the east bearing gifts of gold, frankincense and myrrh; one year ago a request went out for contributions to C.H.A. newsletter. I wonder which will come first, the return of the three wise-men, or some newsy items from the Atlantic Region of the C.H.A.

For this newsletter to be a success, there must be input from the readers.

It is possible that there is not sufficient interest by the members of the C.H.A. to warrant the work required to edit and publish a newsletter. But if the newsletter is to be a reality, this is an appeal for contributions. Material should be submitted in a typewritten form on 8½" x 11" paper. Although Xerox copies from magazines and other publications are interesting, it is preferred that the articles be digested and typed so that copies can be made for inclusion in the newsletter.

The next edition will be published when sufficient material justifies the efforts required to edit and produce one.

On January 5, the newsletter file was forwarded to me with the request that I try to produce the third edition of the newsletter in time for the conference.

No specific publication dates for the newsletter have been set down and I think that this may have a bearing on the lack of material available.

I would like to take this opportunity to thank those who have forwarded contributions to this edition and a special thanks to the typists of Central Region, Miss L. Weir, Mrs. B. Brazeau (the only one who can decipher Adam's hieroglyphics) and Miss L. Ram for their assistance.

The picture on the front cover was drawn by Mr. Doug Allen, a college student employed as a seaman aboard Baffin 1969.

R. P. Golding.

The Value of Experience

What a man has learned over the years through experience gets under his skin; it enters into the marrow of him. It becomes part of his personality and he will know instinctively how to act and what to decide in circumstances with which he has become familiar.

The inner conviction of an experienced man acting in his sphere of competence endows him with stability, and stability makes him reliable. People know where he stands. He is capable of making quick decisions, because he can think back and feel back to similar situations which he has encountered, which often endows him with a prescience in projecting forward.

The value of experience is not so much in its length as in its variety, thirty years of experience does not count for much if it merely means ten times three of the same kind of experience. It is exposure to a variety of greatly differing situations that makes experience a treasure-house.

Education is no longer a terminal process, it is a lifelong necessity. What is called adult education has in French an even more descriptive name: "éducation permanente". We might perhaps translate that idea in English as "never-ending education".

To be able to look ahead is initially a native gift and not a common one. Some people have questioning minds, inclined to find out why and how things happen, curious about the future. This native gift can be developed through experience and through training. Foresight depends on understanding, and people can be taught by experience or in a formal way to understand things. Foresight has been described as the product of insight.

Abstract from an: Address by Neil J. McKinnon, Chairman,
Canadian Imperial Bank of Commerce.

SPECTRAL, BUT NOT ILLUSORY

Photographs and television pictures from aircraft and satellites even now play an important role in surveying the earth and its environment. Stills taken on the Gemini and Apollo flights have proved of great value to, for example, geologists assessing the composition of vast areas of the earth. And television pictures relayed to earth by meteorological satellites make possible accurate long-range weather forecasts.

But such pictures are taken in a rather narrow band of wavelengths—mostly the visible light portion of the electromagnetic spectrum. Now, spaceborne equipment is being developed to produce images at ultraviolet, infrared, and microwave frequencies.

These systems will give scientists new kinds of information about the earth and its resources. Every object on the surface of the earth absorbs, reflects, and emits electromagnetic energy at distinctive wavelengths. Any given object will appear clearly at one frequency but be invisible at another. Each, in other words, has a distinct spectral signature, and it's possible to uncover, by taking simultaneous images in various bands, characteristics not apparent in the visual range alone. Collection and analysis of this data will reveal sharp differences among apparently identical objects. And various things may be learned about chemical and physical properties.

Attempts to make sense of spectral characteristics have been going on for several years, particularly at organizations such as Purdue University's Laboratory for Agricultural Remote Sensing.

It is not a simple task. "Man has had millenia of experience interpreting what he sees with his eyes, but only a few decades of seeing with ultraviolet and infrared," says Michael D. Richter, a senior systems engineer at TRW. "He's only beginning to understand the meaning of what he sees there, to learn how to cope with the extra information these additional wavelengths give." In the infrared wavelengths, for example, healthy vegetation shows up in bright red, blue or green may mean plants are dying.

At the moment, scientists working in five fields are potentially the biggest beneficiaries of data obtained from earth resources satellites:

CARTOGRAPHY

A satellite could map an entire area with a single photograph more accurately than is possible with the perhaps thousands of conventional aerial shots needed to blanket the same area. In addition, repetitive pictures from an orbiting spacecraft such as the proposed ERTS would record landscape changes as they occur.

AGRICULTURE AND FORESTRY

Healthy crops and trees could be distinguished from the diseased, and the optimum use of land areas could be determined from soil surveys made by satellite-borne sensors. Different kinds of crops could also be determined automatically, making it possible to predict agricultural yields. Forest fires could also be quickly detected.

OCEANOGRAPHY

The distribution of ice floes, ocean surface temperatures, current patterns, and marine biology data could be monitored via tv and infrared and microwave frequency systems.

GEOLOGY

Large-scale - continental - geographic features are best viewed from orbiting spacecraft. Fractures and faults, for example, show up better in radar images than in visual photographs. But both kinds of observation would help in locating petroleum and mineral deposits. Repetitive infrared and visual imaging could be used to indicate geothermal power sources, movements of the earth's crust, and the anomalies that precede such natural disasters as earthquakes, landslides, and volcanic eruptions.

HYDROLOGY

Accumulations of snow and ice could be monitored to get more accurate estimates of potential water runoff. Surface water in lakes, rivers, and ponds could also be surveyed, with flood-control, pollution-control, irrigation, and power programs benefiting immeasurably from such data.

The potential benefits of an earth resources system far outrun the estimated costs of developing and operating it. "In our case studies, the benefits in a number of areas would total approximately \$12 billion globally over a 20-year period," declares John E. Naugle, NASA's associate administrator for space science and applications.

Is This A Record?

On 30th June, the B.C. Ferry "Queen of Prince Rupert" was approaching the ferry terminal at Prince Rupert when she touched something. Her Captain thought that it was probably a deadhead which had hung up on a charted 4 fathoms, 3 feet shoal lying off the terminal (Chart 3701). However, knowing that the CSS William J. Stewart was in the area, he called the ship on R/T when he docked at 0930.

We had a launch observing in the area and immediately detached it to investigate the report. A rock pinnacle with a least depth of 2 fathoms, 3 feet was found. The examination buoy was left in position.

The terminal authorities for the B.C. and Alaska State Ferries were informed of the danger at 1100 a/s the daily ferries were still manoeuvring in the vicinity.

The District Marine Agent was visited and informed of the danger and that a temporary buoy was still marking the shoal.

Digby Island radio station started to broadcast a Notice to Shipping early in the afternoon.

Three days later when a D.O.T. ship was available, a permanent buoy was laid on the shoal and they were assisted in accurately positioning the buoy on the pinnacle by one of our launches.

Elapsed time from first report to shipping in the immediate vicinity being informed of the danger ... ninety minutes.

Elapsed time from first report to Notice to Shipping being broadcast by the D.O.T. ... under four hours.

Elapsed time from first report to a permanent buoy being laid to mark the danger ... seventy-six hours.

An example of what can be achieved by co-operation between the Mariner, the Hydrographic Service and the Department of Transport.

Can Atlantic or Central Region beat these times???

It is of interest to note that the ferry touched at a zero tide when she was drawing fifteen feet. On the following day there was a minus tide at Prince Rupert. The B.C. and Alaska State Ferries have been using this terminal for about four years and their ships always draw about fifteen feet. Their approach to the terminal had always been over the charted 4 fathoms, 3 feet shoal. Not till a zero tide co-incided with their berthing times was this danger even suspected. So even in well travelled major harbours, the Hydrographer cannot be completely sure that he will not locate some danger to shipping.

H. S. (and) ands.

Deep Sea Oil Well System

Economical development of offshore oil wells at depths from 400 to 1,200 ft. will be possible with a new production system designed by the Lockheed Missiles & Space Co., and to be engineered and built by a new Canadian subsidiary, Lockheed Offshore Petroleum Services of Vancouver.

The system consists of a number of components in which men will be able to work in a "shirt-sleeve" environment to depths of 1,200 ft. or more while remaining at the same atmospheric pressure as the surface.

All permanent elements of the system will be located on the ocean floor to reduce storm and marine traffic hazards, and to avoid cluttering the oceans with surface structures.

A typical oil well will be drilled from a ship and a wellhead cellar lowered and fastened automatically onto the wellhead. Next, a smaller ship carrying a steel utility capsule will move into position over the well and lower the capsule carrying men and equipment.

The utility capsule will mate securely with the cellar, forming a watertight seal, and a hatch between the units opened to form a work area about 38 ft. high by 8 to 10 ft. wide.

Output from a number of wells will be fed through lines to a minifold center also located on the ocean floor. Liquids will be mingled in the manifold center and passed through other lines to a conventional separation facility.

All three ocean floor components, the manifold centre, the manned capsule and the wellhead cellars, will be maintained at 1 atm pressure. Oxygen levels, temperature and other vital conditions for life support will be regulated to give workmen a comfortable environment.

An instrument panel in the capsule will provide continual readings on the environmental conditions and on the communications and air recirculation lines to the surface.

In case of an emergency, all lines to the surface could be quickly sheared and the capsule will bob safely to the surface. As the capsule will be maintained at surface atmospheric pressure, there will be no dangers from decompression.

"The Grandfather Clause"

I was presented with a certificate of competency as hydrographer; incidentally, the certificate was not dated. Along with the placard with its Old English scroll, etc., was a note stating that I qualified under the "Grandfather Clause".

I considered this grandfather situation as an affront to my physical prowess. I picture a white headed old man, back bent from many years of labour, shuffling to the office to relax and rest awhile each day.

Then it struck me, maybe this clause was meant in respect, like the respect that the children of a few generations ago held for their elders. This made me feel a little better, so I gathered up enough strength to open the office dictionary at "grand" and "father".

"Grand" -- of imposing character, magnificent, impressive dignity, inspiring, prominent by reason of great ability, high character, noble, worthy of exalted respect, prominent in rank; being one degree of relationship more distant than the ordinarily indicated by the word qualified, august, dignified, elevated, exalted, great, illustrious, impressive, imposing, lofty, magnificent, majestic, stately, sublime.

"Father" - a patriarch, an aged and reverend man or honored official, an author, founder, the chief men of an assembly.

So it is quite obvious that the term grandfather can be very flattering indeed, especially if this was the thought behind the C.H.A. executive in granting special recognition to some of the older servants of the C.H.S.

Comments on Quotes

When the CHS regards a Mariners ticket as the equivalent of a Degree, then they might get some Mariners. And also, if they pay rates equivalent to industry for the ticket. But, no young fellow with a ticket is going to be attracted when his ticket is looked on as a piece of paper that anyone can get by going to sea for a few years and learning nothing in the meantime. Nor will he come to us for peanuts.

Secondly. We do suffer from a lack of communication. Can we not take a leaf from the PSAC and get news out quickly? We learn all new regulations from the weekly newsletters ... then after weeks or even months, we get the buzz from HQ. Can they not issue regulation etc "Flashes" which are for information only and which are followed up by Departmental policy statements at a later date? At least, the cynical field man would be denied the usual comment when he reads the Newsletter -- "Wonder when the Dep't. will get around to telling us about this one". Save the poor OIC being caught between the eternal ... well, the PSAC says that I can have it, or do it, etc., etc. ... and the months later when the Department authorizes the action. eg. new telephone regulations, new travel regulations.

SI TU ES FRANCAIS

Si tu es Français et que tu travailles pour "Les sciences de la mer", et tu possèdes peu d'anglais, tu t'embarques sur un "vrai bateau": la tour de Babel quoi!

Pour la plupart d'entre nous, qui avons débuté dans cette branche avec peu de connaissance de la langue anglaise, c'était une situation hasardeuse mais qui valait la peine d'être essayée.

Cela t'apporte de temps à autre des petites complications et même des situations cocasses: par exemple, il peut t'arriver de rire d'un "joke" que tu comprends tout à l'envers et qui t'apparaît tout aussi drôle que sa version originale. Tu peux, aussi, rester bouche bée alors que les autres se tordent les boyaux. Il t'arrive de dire non quand tu devrais dire oui ou vice-versa: de quoi insulter ou faire mourir de rire les natifs Anglais. Hum! Le truc dans tout ça, c'est d'en sortir, si tu peux ... indemne.

Vu que l'anglais est très amical de nature, le milieu où tu travailles est agréable et tu t'y plais. Tu te sens compris malgré ton manque d'expression: même si quelques fois il t'écoute avec un air qui veut dire: "Tabarouette qu'est-ce que tu veux dire"? Il te fait répéter jusqu'à ce qu'il te comprenne.

Le fait de travailler parmi eux t'amène à une meilleure compréhension de leur langue, de sa forme, de son usage et de son expression. Nous sommes tous Canadiens, mais différents de culture, de langue et parfois de religion; ce qui t'amène à un échange de culture et à un enrichissement mutuel.

'The Hot-Line to Tadoussac'

Well it certainly doesn't mean the railway line! For one thing it never gets to Tadoussac - I wonder if it ever will. It does get to Murray Bay (exersez-moi, La Malbaie) but then I doubt if it ever gets hot because they tell me that it takes the best part of a day to amble those one hundred miles from Quebec. No, of course, everyone knows that the hot-line is Bell Tel's best effort to scramble data - it can be so embarrassing. The admiral was visiting and it was supposed to be the chain co-ordinates of our new Mini-fix but instead the little light flashed on and the stupid thing typed out 'BERNICE BABY' MERCUISER
TELL MARSUP THAT THE NEW ENGINES DON'T FIT IN THE BOSS' CAR AND WILL
HE SEND THE VOLVOS INSTEAD.

CATSUP.

And then there was the time that one of the hydrographers found a way to feed the teletype tape into the Data-Speed and back in to the teletype and it kept on repeating:

THE SURVEYMARINE HIT A LOG

THE SURVEYMARINE HIT A LOG

:
:
:

THE SURVEYMARINE HIT A LOG

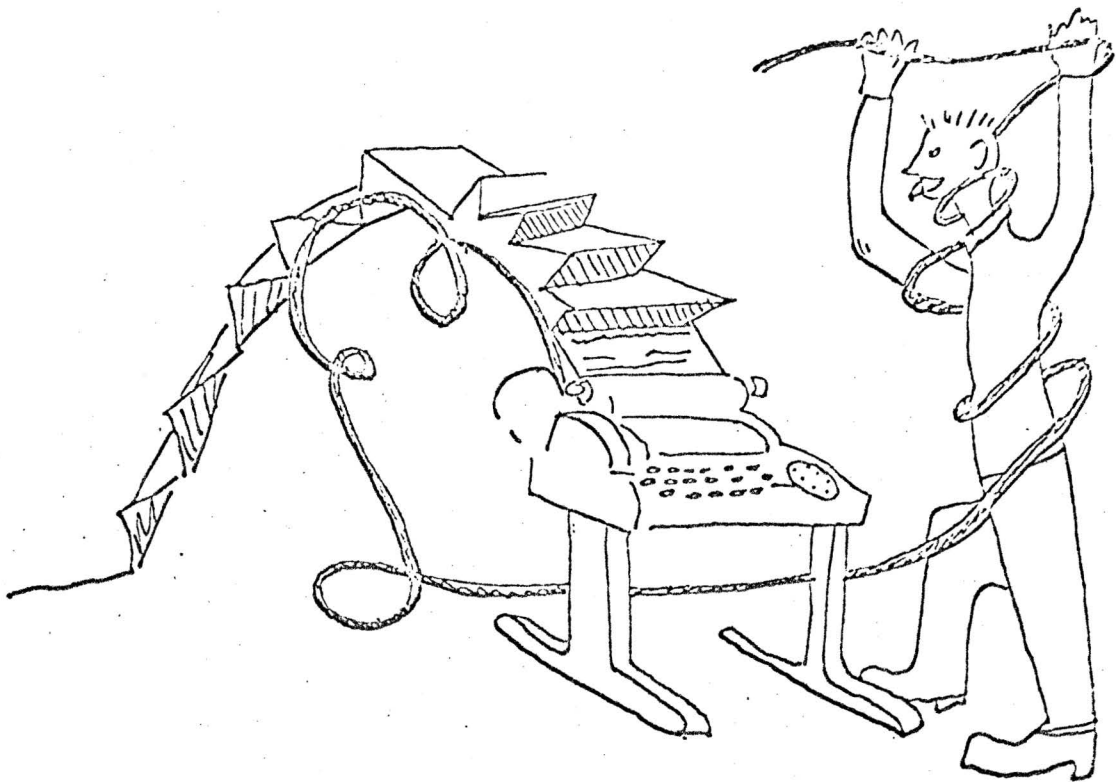
Then someone managed to stop it and it started again and kept on saying:

THE SURVEYMARINE'S ON THE BEACH

ON THE BEACH

:
:

ON THE BEACH

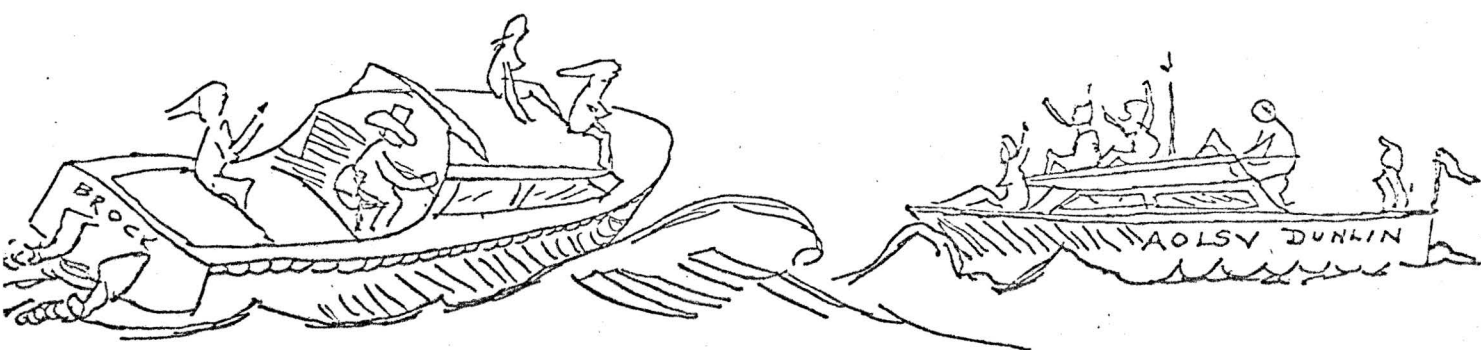


DATA BOUND

'The Hotter-Rods of Tadoussac'

.... Didn't really appear until A.O.L.S.V. 'DUNLIN' put in an appearance. Well there was a sky blue Super-Bee but that was soon ear marked by the local Q.P.P. After that it mainly rested on the pad except for take-offs on long weekends. Atlantic Oceanographic Laboratories super vessel 'Dunlin' came to Tadoussac amongst rumours of an exotic craft that had been observed in the Bedford Basin overtaking the 'Navy's Bras D'Or'. At least it had trim-tabs and was later fitted with a digital ejection seat. The pilot and co-pilot eventually arrived and spent several days souping it up. They then mysteriously disappeared but saying 'Take her out, see for yourself. Oh, don't worry about the single screw, it never breaks down'. Well we took them at their word.

It had always sounded good - that deep throaty roar. It was said that up at Chicoutimi, 80 miles up the fjord, there was a scientist who was measuring the number of salmon by counting the time difference between the arrival of the 'DUNLIN' shock wave and tidal wave. Anyway, there came one of those beautiful sundays when we were all practicing the new hydrographic slogan 'God help those who work on the Sabbath!' So, rounding up some charming passengers we took to the water in our fleet of Bertrams. Having been warned that the A.O.L.S.V. was really something special I took 'her' and some 'shes' while the Midnight Cowboy took one of the 'ordinary' Bertrams plus some more 'shes'. Well, we made pretty patterns that day, the A.O.L.S.V. made the straight part of the dollar while the Midnight Cowboy made the S part. If it was not for the cool Saguenay waters all the shes on the A.O.L.S.V. would have been over with the Midnight Cowboy.



A O L S V GOING THROUGH THE SOUND BARRTER !!!

Of even Hotter-Rods and Hydrodist

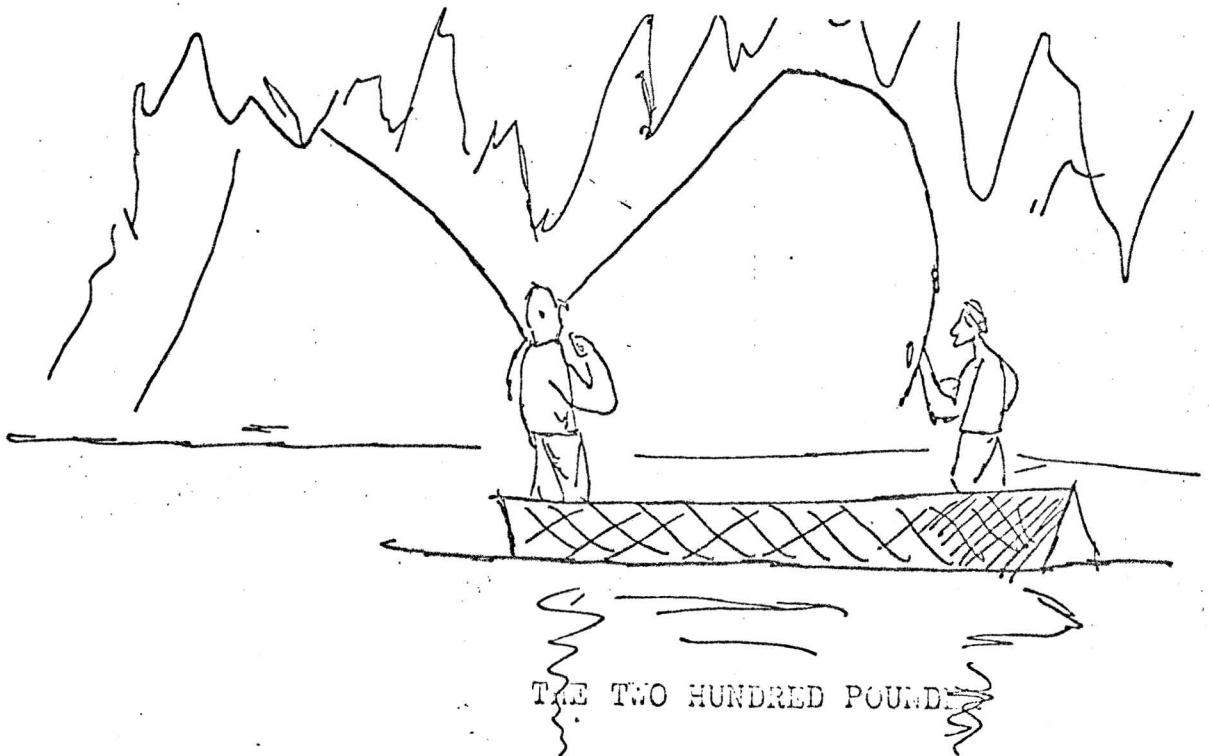
You have all heard of Ferraris and Alpha-Romeos and I daresay that you will all know that there is something in the Italian temperament that makes him a skilled racing driver. Well there was one at Tadoussac this summer - no not a Ferrari - but an Italian and he found a much more thrilling sport in the interest of productivity. First he trained the crews' legal adviser - he is really in medicine but he will probably one day, be debating your right to have a new heart, while it lies pumping in his hand - to be his co-pilot. Then with the Hydrodist firmly bolted where the compass should have been and with eyes glued on that small green dot he shot into the treacherous tide rips. Steering with one hand, left foot on the throttle, right foot on the A.V.C. and right hand on the antenna. 'Log right ahead, whale to right, channel buoy to port dive, dive, dive!'



IT ONLY NEEDS TWO MEN ----- WELL, AGILE MEN

'The Trout Fishing is Fabulous'

When you have visitors there are only so many hours in the day to show them things and when things don't work - well, you'd rather not show them anything!. There is then of course, the girls, the bar ... but consider the impression. But the 'fishing is fabulous'. The hotel manager was not available and so a pass was not available - that cost him \$5 for 24 hours. Now, the licence, 'Use my address' I 'live' in Quebec!' 'No, no, honesty is my policy'. 'Cinq pieces, s'il vous plait, monsieur'. It was cold that night and we dragged around the lake. I was so worried that pretending to wash my hands, I reached over the side and gave his line a sharp tug! Later as we rowed to the shore. 'Well, at least I had a bite'.



Another night, a warmer, better night, fishing with a 'black doctor' I caught a two hundred pounder, but gently pulling the fly out of its gaping mouth I let it go. They say technicians work better after having been caught!

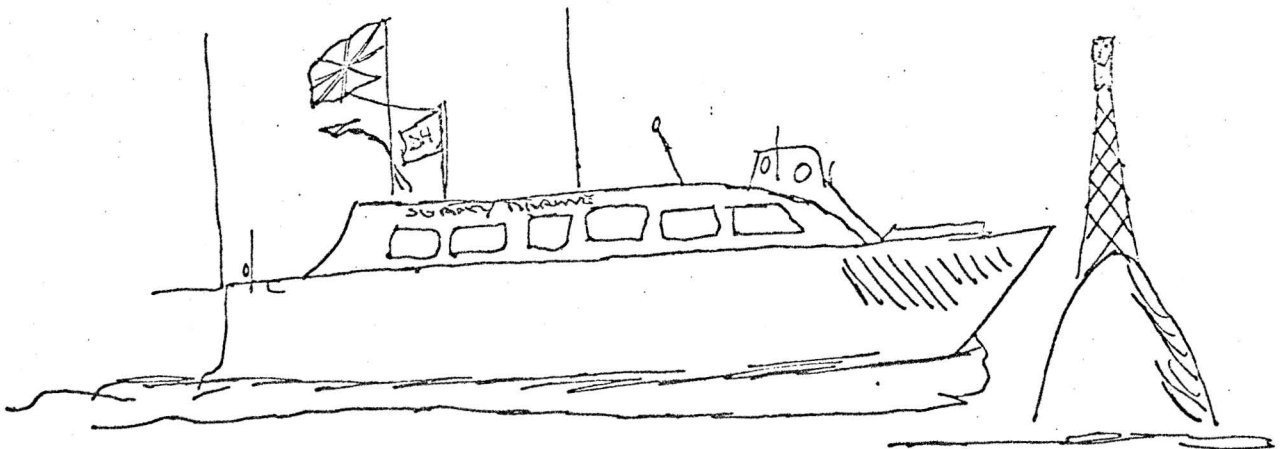
'On other Visitors'

The program was arranged 'The Lower St. Lawrence Survey welcomes you ' A morning aboard the Surveymarine has been arranged for you. Small black notebook in hand'

10:35 Narrowly missed small coasting vessel. 11:07 Struck a steel navigation buoy, made hole in fibre glass forward. No water taken.

11:38 Arrived at Escoumins pilot station, rather earlier than planned.

On consideration of my shaking knees and fine physical shape of my companions, suggested walking 25 miles to Tadoussac. 23:30 Retired to my room, leaving my staff officers in command of the lower bar, planning how to add further soundings to Jacques Cartier's chart of 1548 03:30 Rudely awaked by telephone, requested if I wished to purchase battleship!



WHO NEEDS CHANNEL BUOYS NOW THAT WE HAVE HOVERCRAFT ANYWAY???

On the Purchase of a Mini-Fix Site

There was snow on the ground in May and the summer places were locked and barred. The slender mast of the Minifix rose above the trees and counters began to run, dials light up. Nearby a sign in a small gazebo said that Champlain made a treaty here with the Iroquois in 16

It was hot in Ottawa when a letter came to the Deputy Minister. 'While appreciating the requirements for Marine Research I should like to point out the extreme danger to my young priests who like to camp on Pte. Alouettes and are now in danger of electrocution ... However, a small funds etc.

Jump on the 'hot-line' dispatch my Irish friend the Midnight Cowboy. Government vehicle arrives, small black beaded chain, carelessly drooping from pocket. 'Une piece chaque jour. Certainement, monsieur!'

..... And then there was The List

Modesty (and the censor) forbids me to detail this tremendous document and besides it was a very intimate sheet of information - but the names are fun. There was, let me see? The mother, the daughter, the horse, the nose, the gymnast, the sexitary, etc. Then followed the details, measurements and willingness and capability to take part in the social adventures that lightened the darkness between 10 pm. and 7 am. (Noon on Sundays!)

Notwen's Law Questioned?

Lien Nosredna and Knarf Mahdloc of the D & R Trucking Company (West Coast Division) were contracted by Ekin Notlob to transport canaries in their pantehnicon van from Nacnud to Ekoos. On approaching the crest of steeply inclined Tahalam Hill, they discovered to their dismay, that their pantehnicon van loaded down as it was with canaries, and not being from dynamic Lartnec Noiger could not surmount the crest. Thus the van ground to a halt. Whereupon, Lien (one of the fast rising drivers of the outfit) with a flash of inspiration leaped from the van and began pounding vigorously on the sides. The resulting commotion disturbed the canaries, causing them to panic and fly around in confusion. Lien jumped back into the van shouting, "Drive on Knarf, drive on!" Skeptically, Knarf tried again, and to his amazement the van moved forward and surmounted the hill. "Well, we made it Lien, what did you do back there?" queried Knarf. "With the canaries flying, their weight was removed from the van, which in effect lightened our load, thus we were able to proceed", explained Lien.

Is this possible? Any theories expounded would be greatly appreciated. All employees of the D & R trucking Company (West Coast Division) are ineligible.

"Advice to the Junior Hydrographer"

'If the novice should have the misfortune to break any material portion of his theodolite, so as to render it ABSOLUTELY USELESS, the following plan will be found useful: Do not imagine that such a case is improbable; on the contrary, the most careful surveyor, especially if he be a heavy man, is apt to break through the lid of his theodolite box in using it for a seat. In this case, serious injury nearly always ensues. Or again, with the beginner especially, in his zeal to be in time for dinner, the young surveyor may happen to force down the lid of the box whilst the instrument is not in its proper place. Such accidents are unavoidable, but as they are usually attended with unpleasant consequences, the following rule may be found of use:'

'Having satisfied yourself that the instrument is thoroughly disabled, no further harm can be done to it; and much benefit may accrue to yourself by carefully selecting the most reckless of the boat's crew to carry the theodolite down the hill to the boat. Then the rest is easy; anyone who has a taste for surveying can imagine what happens. Offer a reward of a glass grog to the first man down in the boat, and it naturally follows that the seaman encumbered with the theodolite can scarcely fail to fall over a stone or two, or better still, into some pit or crevice or hole in the rocks. The man is scarcely likely to be injured, but the fall will sufficiently account for the damage done to the instrument, which damage it will indeed most probably increase. There is, to be sure, some risk of discovery; yet we must run some risks in the survey profession, and it is at least better to do so than to incur the certainty of having to pay fifty dollars or more for the repair of the damaged theodolite.'

Selection from "The Admiralty Chart".

Song to an Unsung Hero

The ultimate tribute to any inventor is the incorporation of his surname into the language without a capital letter. For some reason, the British have been especially generous with this form of accolade; the Earl of Sandwich, Lord Cardigan, Lord Chesterfield and the Earl of Davenport are regularly honored in everyday speech and so are such commoners as Macintosh, Macadam, Gladstone and Bowler. But what of Thomas Crapper, the father of the modern toilet? While American slang has acknowledged Crapper with both a noun and a verb, it is still a dubious sort of fame -- and the man whose Valveless Water-Waste Preventer perfected the efficient disposal of the unmentionable is still a prophet without honor in his own country.

In "Flushed With Pride," the latest manifestation of the British affection for water-closet wit, novelist Wallace Reyburn finally gives Crapper his due. Although the book has the ring of a classic hoax, Reyburn presents ample evidence that his man not only lived but made a lasting contribution to mankind's comfort.

Thomas Crapper lived and died in Victorian times, but in terms of sanitary conditions the age was still dark. To flush their toilets, the Victorians simply pulled a chain that lifted a valve that released water from a cistern into a flush pipe. In other words, they just pulled the plug. Since the plumbers who made the valves could rarely insure a snug fit, the water in most toilets flowed ceaselessly. This flow, multiplied by thousands, threatened to dry up reservoirs and spread drought and pestilence over the land.

Superflush: In the 1870's the British Board of Trade sent out a call for a more efficient system -- and Crapper, a Chelsea sanitary engineer, came up with the best answer. His ingenious solution, which can still be observed beneath the lid of many toilet tanks, depends upon a float, a metal arm and a siphonic action to empty the reservoir. Crapper's Valveless Water-Waste Preventer passed its most critical public test in a demonstration at the Health Exhibition of 1884, achieving a superflush that completely cleared away ten large apples, a flat sponge, three wads of paper and four paper sheets stuck to the bowl with grease.

As his biographer cannot resist observing, Crapper's success "was no mere flush in the pan". He went on to develop Crapper's Seat Action Automatic Flush (tipping the seat activated the flush mechanism), a cantilevered toilet for prisons that kept all the piping hidden (convicts tended to bash

guards with weapons fashioned from toilet pipes) and a revolutionary drainage system that did wonders for clearing the Victorian air (it was no accident that fainting damsels of the day were said to suffer from "the vapors").

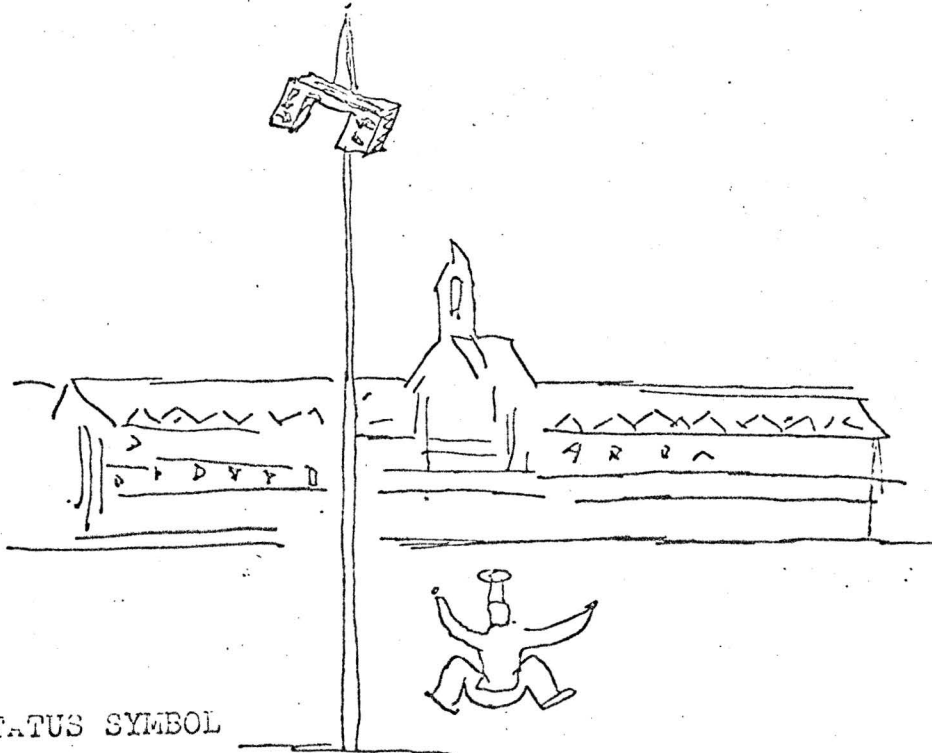
Such breakthroughs earned Crapper a three-story headquarters on King's Road and a royal commission to install the facilities in Edward VII's new country home in Sandringham. Visitors to Sandringham can still observe a subtle example of the class distinctions of the period by noting that the toilet-chain handles in the servants' quarters are plain oval rings, while those adorning the royal lavatories are either "Crown Derby" or "Cream and Gold Fluted China" models.

Aquarius: Reayburn's portrait is embellished with cloacal trivia, such as Winston Churchill's preference in toilets and an account of the invention of the "perforated toilet roll" (not a Crapper coup). Crapper himself lived to a ripe 73 and never lost interest in his vocation. His grandniece recalls visiting Crapper's factory in his last years and watching the old boy happily yank at the chain of an "Aquarius" or "Cascade" model to test some new modification.

Although the Crapper building has given way to a mod boutique, and most of the inventor's proudest fixtures have long since crumbled, at least one testimony to his memory remains. It can be found in the cloisters of Westminster Abbey, among the tombstones of England's most celebrated sons -- the inscription "Thos. Crapper, Sanitary Engineer Chelsea". The inscription adorns a manhole cover.

The Case of the Chef's Desk

So you think that O.I.C.'s are temperamental? Well they are docile when compared with the chef at the hotel Tadoussac. He had the right girth, the right red colour and the right accent - all wrapped up in white suit, apron and hat. A magnificent hat reaching towards the high ceiling of the kitchen. The girls lived in fear of him - well some did and some didn't, and that presumably is why he found his magnificent hat amongst the slops, in a garbage pail. Who, who, who ...? The forehead veins pulsating. That night we planned, what can be done that can exceed this piece of aggravation. Stealthily at midnight, we were caught - but returned at one. The night watch on his round. Status symbol, a huge desk, in the kitchen corner, on which he used to sit and glare. Emptied the drawers, over the fence, out in the front - huge lawn. Halyard tied and heave-ho. Morning came-neither Canadian maple leaf or Fleur des Lies - but a huge wooden status symbol lolling in the breeze.



THE STATUS SYMBOL

WHY DON'T WE ?

Now that certain members of the federal parliament are advocating the appointment of a parliamentary committee to investigate the possibilities of introducing distinctive Canadian awards, decorations and medals WHY DON'T WE follow suit and develop something along the same lines in the C.H.A.?

We could have distinctive campaign ribbons for service in different geographical locations, North Pacific, North Atlantic, the Great Lakes, fleuve St. Laurent, the Arctic regions, and of course Ottawa Headquarters should not be overlooked.

- An award should be made for the best kept secret "not informing the junior staff that they are entitled to some extra allowances".

- A decoration for the development of a positioning system that would add the greatest amount of confusion to the hydrographer.

- The Order of the Bent Propeller - a bent propeller to be worn around the neck on a piece of mooring line. To be presented to the hydrographer for the worst blunder of the month.

Such a system opens up all kinds of possibilities, the idea of a distinctive hydrographic uniform could be resurrected - service stripes, rank epaulets and of course the above mentioned awards, decorations etc. could be proudly worn in the wardroom or in a field tent as the case may be. We could set aside every Wednesday as our uniform day, winter and summer.

Further ideas for "WHY DON'T WE ?" are welcomed and of course will be published in full.

We have learned that -

"Mr. Norman Gray is going to present an award to the Hydrographer-of-the-year at the 1970 Conference".

Now we know where that elusive trophy is !

CLEANING FROM MACLEANS

Had we but world enough and time,
This shyness, Mister, were no crime ...
But every day I always see
Your eager hand that grabs for me.
And yonder all before me lies
The same approach from other guys.
A country road, an empty tank,
That eager hand upon my flank.
And then at night you try once more,
Expensive wine, the bedroom door;
And your quaint honour turns to lust.
For you, a conquest is a must.
You say I'm frigid; don't be mean;
Let's wait at least 'til I'm six een.

Had we but world enough and time,
This shyness, Mister, were no crime ...
But hours are missiles in their flight
And I have quite an appetite --
So do not let the moments fly
While close together we might lie;
To clasp me, naked, in the tomb --
A dismal thought of gloom and doom;
There swelling worms of paltry size
Would seek the opening you prize
And my insatiable lust
And all your skill would turn to dust;
The grave's a cold and final place --
Come, give me, now, a hot embrace!

Sounding Off

In the June 1969 issue of the CIA Newsletter, 'Sounding Off' discussed the "Rigid examination system" associated with "Hydrography II". It was suggested that "many teaching and training authorities are questioning the usefulness of such a requirement".

It should be pointed out, however, that each student participating in this type of program is able to advance at his own speed, learning and digesting it all as he goes. By this process there are no "failures", only slow learners.

Before dispensing with the present system and adopting another, we must be prepared to spend the time needed to coach each student through the course.

If we are not prepared to coach the student; if we insist on an intensive study program, as now exists, we must continue with the formal examination system.

It is my view that the "formal examination system" cannot be done away with. However, the "one examination system" can be changed. Many examinations should be given in each subject during the course of instruction, minimizing the dangers of the "one examination system", and eliminating the possibility of a student becoming a "one examination failure".

George Macdonald

DISCUSSION CORNER

Observations, comments, complaints, etcetera. (You name it).

FORMS

B.C.R., Appraisal, Data Stream - What next ?

How come a personnel officer was not available to introduce this new form ? Are new forms becoming so numerous that personnel can't handle them ?

Data Stream - A rush job - "must get ours out before other regions foul it up" seemed to be one message.

The managerial aspect of HIC's functions should be played up and not down - over half the year or close to it leans more to managerial responsibilities than straight supervision.

EDUCATION

Any french courses for hydrographers could be useful when working in Quebec. I wonder how much use will be made of the knowledge gained by those in the branch who are taking courses now ?

C.H.A. Luncheon Meetings - let us not forget them - after the conference. Do the other regions have any ?

COMMUNICATIONS

Monday morning meetings and seminars - do the other regions have these regularly ? Would like to see these kept up - good for communications and practice for chairing meetings.

AUTOMATION

Hope all the R D Groups can handle all 'field parties' requests this year - let's advance.

Automated Cartography - Be patient !


A.R. Rogers.

EDUCATION AND DEVELOPMENT SECTION

ACHIEVEMENT TESTING

Testing can be an important phase of the training programme, especially when it is concerned with skill training. In fact, it is unwise to attempt the administration of a training programme without some effort to measure its effectiveness. The achievement or performance of each trainee should be measured in some manner. If a formal testing programme is not utilized during training, then it is mandatory that some formal or informal evaluation be conducted to determine how well the trainee performs his duties on the job. It is more efficient to have a continuous check on a trainee's progress during the period of training, than to wait until after he has been assigned to the job to see whether or not he has the knowledge and skills which his supervisor demands.

Testing is the evaluation of performance in relation to a standard. It has been proven that a testing programme, properly administered in a training situation, provides a more accurate measure of a trainee's qualifications to fill a job than can be obtained by the personal subjective judgment of one individual or group of individuals.

THE PURPOSE OF TESTS

The use of tests in training realizes four major purposes:

(a) Aids in improving instruction;

1. Discovers gaps in learning. Properly constructed tests reveal gaps and misunderstandings in trainee learning.
2. Emphasizes main points. A test is actually a valuable teaching device, in that trainees tend to remember longer and more vividly those points which are covered in an examination.
3. Evaluates instructional methods. Tests measure not only trainee performance, but also instructor performance.

(b) Tests provide an incentive for learning. Trainees learn more rapidly when made to feel responsible for learning. For example, they are more likely to pay close attention to a training film if they know a quiz is to be given when the film is concluded.

- (c) Tests establish a base for assigning grades. They identify those trainees who have attained the minimum standard of performance and those who have not.
- (d) Tests furnish a basis for selection and guidance. If tests are well constructed and actually measure trainee performance, the test results become a valuable basis for determining whether a trainee should be placed in a new job, receive advanced training, or be recommended for promotion to a job requiring greater ability.

USES FOR TESTS

The pre-test -- A pre-test determines the status of knowledge of the trainee before the instructional programme is begun. A test designed for use at the beginning of a training period should cover the whole area in which the man will be trained. It should be comprehensive in scope but general in application. Pre-testing is practical and can be effectively accomplished by using variations of the final achievement test. Different forms of the final test can be used to pre-test, or selected portions of the achievement test to be given during the course may be adapted for the initial survey of trainee knowledge.

The use of a pre-test in a course often serves as an excellent motivating device. Trainee interest is quickened and thus attuned to the subject matter to be taught. He realizes that he can gain considerably from the instruction to come.

The Progress Test -- Used during the instructional period, this type examination answers the questions: "How well has the material been taught?" "What parts of the instruction need re-teaching?" and "Is the rate of progress satisfactory?"

The Qualifying Test -- Employed at the end of a period of instruction, an achievement test serves as a qualifying examination. It provides the answers to the questions: "Is this man now ready to do the job for which he has been trained?" and, "Has he mastered sufficiently the skills and knowledge needed to ensure success in this next assignment?" An end-of-the-course or qualifying test should be broad in scope and detailed in coverage.

GEBCO

The oceans occupy 70.8% of the surface area of our planet. It is a vast inhospitable region, filled with large mountain ranges and vast flat abyssal plains. In fact it appears as if there will be as great a variety in the topography of the ocean floor, as we can see on the continental regions of our world. GEBCO is a bathymetric chart of this region. It means General Bathymetric Chart of the Oceans.

The first edition of the chart was prepared and published in 1904 by His Serene Highness Prince Albert I of Monaco, and his Scientific Cabinet. Between 1912 and 1927 the same group prepared and published a second edition of the chart. After the second edition was published, the International Hydrographic Bureau accepted the responsibility of revising the chart and published a third edition between *1932 and 1955. In 1957 the IHB, in cooperation with IAPO and ICSU, started work on the fourth edition. State members of the IHB and IAPO were asked to assume responsibility for compiling data in various portions of the world. In addition, all state members were requested to forward their bathymetric data to the Hydrographic Office which had assumed responsibility for a particular area.

- * IHB -- International Hydrographic Bureau.
- IAPO -- International Association of Physical Oceanography.
- ICSU -- International Council of Scientific Unions

The bathymetric data is incorporated on a master set of plotting sheets by the Hydrographic Office which is responsible for that particular section of the world. It is converted to metres and corrected to the true depth.

Plotting sheets used to compile the data are the British Admiralty System. These sheets are on a Mercator projection to latitude 78° N. and S., and on the Polar Stereographic projection from 78° N. and S. to 90° ; scale is 1/1,000,000. In this system a total of 612 sheets cover the world. There are two other systems of world plotting sheets which are used in the GEBCO program, but the British Admiralty System is the one recommended.

After the plotting sheets have been completed they are forwarded to the International Hydrographic Bureau. A committee of scientists, appointed by the IHB, IAPO and ICSU, review the bathymetric interpretation. After this review the sheets are forwarded to the Institut Geographique National de Paris, which handles the final compilation, publication and distribution of the chart.

What does the published chart look like? It consists of twenty-four separate sheets. Between latitudes 72° N. to 72° S. there are sixteen sheets on a Mercator Projector at a scale of 1/10,000,000 at the equator. The polar regions are covered by eight sheets on a Polar

Stereographic Projection at a scale 1/3,100,000. The chart is so designed that all twenty-four sheets can be butted together and so form one large wall map of the world. The bathymetry is shown in eight shades of blue, and land areas are shown in eight shades of buff plus one glacier tint.

Canada's areas of responsibility in this project are the western Arctic Ocean north of latitude 72° N. between longitudes 0° and 180°. In addition to this we are responsible for the compilation of thirteen 1/1,000,000 plotting sheets south of latitude 72°N. These sheets cover the Hudson Bay, Arctic Islands and Eastern Coastline of Canada as far south as Newfoundland.

In addition to these areas, we collect any bathymetric data gathered by Canadian ships in any region of the world. After converting these data to metres and correcting it to true depth it is then forwarded to the Hydrographic Office responsible for that region of the world. During 1969 Canada has forwarded approximately 30,000 miles of soundings to various Hydrographic Offices.

The program of charting the oceans is a never-ending one, and the International Hydrographic Bureau intends to produce a revised edition of GEBCO every five years.

A. Smith

January 1970

This syllabus for the 1970 Hydrography II course is presented for general interest. The examination papers for the 1969 course will be included in the next edition of the newsletter.

1970

Introduction

(1 Session)

Welcome by Dominion Hydrographer

Course Outline -

Objectives
Methods
Miscellaneous

1970

Survey General

(16 Sessions)

In part these subjects will be a review of subjects taught on the basic hydrography course. They will, however, be covered in greater depth with emphasis on accuracy and the effects of errors. On many of these subjects a general discussion should evolve after a brief lecture.

Computation Review

4 Sessions -

- Three-point problem
- Eccentric stations
- Spherical excess
- Geodetic positions
- Advantages and disadvantages of the three methods of horizontal control
- Strength of figure (R)
- Figure adjustments
 - station, triangle, quadrilateral, polygon
- Net adjustments (field)
 - between bases, azimuths, positions
- Traverse adjustment

Horizontal Control

2 Sessions -

- Specifications of horizontal control
- Use of established control
- Survey monuments
 - construction, description
- Distance measurement
 - units of measurement, conversions
 - taping a baseline, subtense base
 - subtense bar
 - stadia
 - rangefinder
 - reduction to sea level

Air Photos

2 Sessions -

Types of aerial photographs
Measurements from photographs
Instruments used by hydrographers
Targetting of control
Instruments used in Surveys and Mapping Branch

Theodolites, Wild T1, T2

4 Sessions -

Principles and use
Accuracies
Checking and adjusting
Notekeeping

Sextants

1 Session -

Principles and use
Accuracies
Checking and adjusting

Vertical Control

2 Sessions -

Elevations and heights
Bench Marks
Levelling, three-wire
 principles, accuracies, notes
Levelling rods
Vertical angles
 principles, accuracies
Tape
Barometer
Approximate methods

Level, Wild N2, NA2

1 Session -

Principles and use
Accuracies
Checking and adjustments

Reference Texts

Admiralty Manual of Hydrographic Surveying
U.S. Hydrographic Manual
C.H.S. Tidal Manual
U.S. Special Publication #8
Wild publication G1 902e Levelling
Wild publication G1 903e The Theodolite and its
Application

1970

Hydrography

(16 Sessions)

The subjects listed here are not new and it is expected that all members of the course will have had considerable experience with them. Emphasis will, therefore, not be placed on "how" to carry out certain functions but rather to give an understanding of "why" we do things in a certain way, and alternate methods used in the different regions and by other agencies.

6 Sessions -

Reasons for accuracy requirements.

Accuracy of sounding (horizontal and vertical)
in nature (absolute accuracy)
at scale (relative accuracy).
different methods of horizontal control
different methods of vertical control
combinations best suited to meet requirements

Methods of sounding (regular and large scale)
density of sounding coverage
pattern of lines
supplementary lines
establishing and running on ranges

Shoals

detection: examination of soundings, old
publications, local knowledge, etc.
examination: star, sweep, grid, diving

Range lines

sounding
horizontal control (azimuth) accuracies required
sensitivity of ranges

1 Session -

Shorelining

high water line
datum line
air photos
sextant
stadia (including wharf plans)

1 Session -

- Bottom samples
 - coverage
 - types
 - methods

1 Session -

- Aids to Navigation

- Field sheets and boat boards
 - materials, inks
 - plotting stations and angles
 - checking

1 Session -

- Sounding Equipment (accuracies, precautions, limitations)
 - lead line
 - sounding pole
 - sweep (bar and wire)
 - pressure methods

4 Sessions -

- Echo-sounding
 - basic principles
 - frequencies
 - beam width
 - velocity of sound in water
 - squat and settlement of vessel
 - interpretation of sounding graph
 - white line, fish echos, weeds, etc.

1 Session -

- Echo-sounders
 - types used in hydrographic service such as
 - K.H. models
 - Edo 9040
 - Raytheon

Reference Texts

- Admiralty Manual of Hydrographic Surveying (vol. 2)
- U.S. Hydrographic Manual

1970

Radio Aids

(22 Sessions)

This course is intended to give the student a good understanding of the principles, characteristics, operation and calibration of electronic positioning systems used in C.H.S. Emphasis will be placed on the more important systems: 'Decca,' Hi-fix, Minifix and Hydrodist/Tellurometer.

Introduction and Basic Principles

4 Sessions -

- Advantages and disadvantages of EP
- Systems in use
- Wave propagation and related terms
- Frequency spectrum
- Refraction and reflection
- Signal types

The Systems

2 Sessions -

- Geometric configuration
- Range
- Accuracy
- Method of use

The Lattice

6 Sessions -

- Computation and plotting of range/range
and hyperbolic lattice
- Accuracy lobes, range/range and hyperbolic
- Diamond of error
- Standard error
 - angle of intersection
 - lane expansion
- Work examples and plotting

Using the Systems

7 Sessions -

- Advantages and disadvantages of range/range
or hyperbolic systems
- Field preparation
 - site selection
 - operation
 - monitor
 - calibration
 - logistics
- Limitations

Tellurometer/Hydrodist

3 Sessions -

- Principles of operation application and use
- Ground swing
 - errors
- Corrections to observed values

Reference Material

- Admiralty Manual of Hydrographic Surveying Vol. 1
 - Chap. 3.
- Use of Hi-Fix in Hyperbolic Form, 1966 R.M. Eaton
- Mini-Fix Survey, Georgian Bay, 1967 E. Brown
- Radio Aids to Maritime Navigation and Hydrography
 - Special Publication No. 39 I.H.B.
 - Introduction
 - Chap. I
 - Chap III Sec. 1, 8, 9

1970

Geodesy and Projections

(10 Sessions)

The section on geodesy is primarily based on Admiralty Manual Vol. I. Projections (general) is a review of various common projections showing their qualities and the implications of their use. Polyconic projection is introduced into this course for the first time this year. This subject was dropped from the Hydrography I course a few years ago. Computations of the projection will be discussed in detail.

Geodesy

4 Sessions -

- Geoid and spheroid (general)
- Gravity, equipotential surfaces
- Meridian arcs
- Plumb line
- Latitude and longitude
- Laplace's equation
- Relationship between geoid and spheroid
- Constants and variables of the spheroid
- Calculations of the spheroid

Projections (general)

2 Sessions -

- Projections on a plane surface
- Distortions and errors
- Orthomorphic qualities
- Grids and graticules
- Scale factor
- TM and UTM projections
- Comparison of different types

Polyconic Projection

4 Sessions -

- Advantages and disadvantages
- Computation

Reference Texts

Admiralty Manual Vol. I, Chap 2
C.H.S. Manual, Chap 5
U.S. Special Publication #5
Geodesy for the Laymen; U.S. Air Force

1970

SEAMANSHIP AND PILOTAGE

(10 Sessions)

Because of the short course duration, the objectives have been limited to the following:

- a) to give the hydrographer an appreciation of how his product is used by the mariner;
- b) to orient the student ^{to} routine organization and safety measures on board a larger ship; and
- c) to introduce him to those elements of navigation and seamanship which will be of maximum use on board a small craft.

Seamanship

4 Sessions

The Vessel

An outline of the vessel and its equipment
Nautical terminology

Watchkeeping Routine

The topics of navigation and seamanship necessary to conduct a small vessel at sea during the day or night, e.g. routine checks on the compass, weather, the vessel and navigation lights, how to search for coastal lights.

Rule of the Road

Sufficient knowledge of the international collision regulations and Great Lakes rule of the road to be able to recognize lights and shapes and avoid collision, sound signals and conduct in fog.

Manoeuvring

A basic treatment of the proper use of engines and mooring lines to handle a craft in a waterway, anchoring, management of a vessel in heavy seas, precautions to be taken when working close to the shore, means of refloating beached craft with emphasis on the safety aspects of the operation and means to secure a beached craft ashore. An appreciation of the dangers involved in using small craft for hydrographic work and how to minimize these dangers.

Emergencies

This includes visual distress signals, the use of life saving equipment such as lifejackets, belts and inflatable rafts, survival at sea and man overboard procedures, practical use of fire fighting equipment.

The operation of radio does not come under the scope of this course, but it will be necessary for the students to know radio distress procedure.

Weather

The student must know how to obtain a weather report or forecast and how to make intelligent use of it. Instruction on barometer tendency and the effect of wind on the sea will be given together with the effect of heavy weather on the crafts handling capabilities.

Pilotage

6 Sessions -

Chartwork

In order that a vessel's position may be found along a coast and a coasting voyage planned, the following knowledge is required.

How to use a chart, parallel rulers and dividers to lay off a rhumb line course, a bearing and to measure distance, fixing a vessel's position on a chart by employing bearings, vertical sextant angles and soundings, and general information printed on a chart which will be of use to the coastal navigator, an appreciation of the effects of wind and currents, the difference between course steered and course made good, and dead reckoning.

The Compass

A practical knowledge of deviation and variation with some very elementary theory and do's and don'ts relating to the compass to enable the hydrographer to correct courses and bearings. In connection with this and the section on chart work, instruction will be given on how to take a compass bearing using the instruments available and how to use a transit bearing to obtain a compass error.

Electronic Aids

In order that the vessel's position may be found in poor visibility, instruction will be given on using radar as a navigational aid. Time will be spent on the limitations of radar especially as regards the relative motion display and the anti-collision problem.

Buoys and Navigation Marks

Recognition of the main buoys and marks used in Canadian waters so that the craft may be navigated safely in restricted waters.

Publications

Some publications such as tide tables, pilot books and light lists are of particular use to the coastal navigator and require little training to use. These will be discussed.

Safety

General safety precautions such as proper ventilation of enclosed engine spaces, cleanliness of the craft especially with regard to inflammable material. Routine check on the craft and lifesaving equipment before setting out.

References

Rules of the Road for the Great Lakes SOR54/675
The Collision Regulations
Survival at Sea
Safety Afloat '68
A Guide to Coastal Navigation by Capt. Llewellyn

1970

Tides and Water Levels

(7 Sessions)

This subject deals with relevant background items as well as with the practical aspects of working with fluctuating water levels. The subject matter covered will appear as a review to some but much will appear new to those who have been away from tidal waters for some time.

1 Session -

Types of tides
causes
distribution in Canadian waters

1 Session -

Datums and levels
Use and interpretation

1 Session -

Ott and Ottboro gauges
Principles, operation, installation, characteristics
limitations and errors

Field notes
gauge records
tabulation of temporary gauge data

2 Sessions -

Use of tidal records for charting
Datum transfer
Use of tide tables
Co-tidal charts

2 Sessions -

Tour of Tides and Water Levels Section
gauge maintenance and calibration
data processing
production of tide and current tables

Reference texts

C.H.S. Tidal Manual
Admiralty Manual, Vol. 2

1970

Currents

(4 Sessions)

Nature and Causes of Currents

Wind-driven, density, run-off, evaporation, tidal streams, inertia currents.

General features of open ocean and coastal current systems. Estuarine circulation.

Variation of currents with depth, time and location. Influence of internal waves and tides.

Methods of Detection

Ship's drift, geostrophic calculation, drifting targets, current crosses, electro-magnetic methods, photogrammetry, current meters, continuity considerations.

Specific Measurement Techniques and Difficulties

Mooring and recovery of meters, choice of instruments, spacing of measurements in time and space, handling of data, pitfalls.

Applications of Results in Hydrography

Current tables, pilots, chart information. Group discussion on value of current information as now presented; how to improve and/or augment it.

Reading Material

The above material is not based on any particular books, but The Sea Around Us by Rachel Carson contains some good general discussions of currents, and Introduction to Physical Oceanography by W.S. von Arx has sections describing instruments and techniques in considerable detail.

1970

Chart Production

(4 Sessions)

The students should gain an insight into the production and maintenance of charts. They should, in general terms, become acquainted with the methods, procedures, materials and tools used. They should be given an understanding of the reasons for charting requirements, the value of information supplied by outside agencies and the interplay between chart production and field work.

Planning (Survey)

- Determination of priorities
- Determination of specifications
 - scale
 - limits
 - detail requirements
- Regional and headquarters input
- Lead times
 - presurvey compilation
 - presurvey photography

General

- Types of charts
 - navigation, fisheries, etc.
 - information required on different types
- Classification of charts
 - first edition, new edition, reprints, etc.
- Presentation of information
 - size, color, symbols, etc.

New Charts (Preferably demonstrate the life cycle of one chart,

- Compilation
 - specifications
 - sources of information
 - selection of information

Drafting
 procedures (general)
 materials
 tools

Checking
 at intermediate stages
 final

Printing

Chart Maintenance

Chart corrections
 notices to Mariners
 hand corrections
New editions, reprints, corrected reprints
 maintenance copies
Sources of revised information
 revisory surveys
 outside sources
Verifying information

Chart Distribution

Dealers
Publicity

Miscellaneous

Feedback from chart users
Facilities available to assist field staff
Information exchange between chart production and field staff

PROLOGUE

The CHA's been bugging me
Concerning certain poetry.

They feel that with my pen in hand
I should make a final stand
And give existing blasphemys
To the CHA Newsletter committee.

The words contained on following pages
Will follow us down through the ages,
And if critical they seem to be
Remember-it's just poetry.

But if it brings to our attention
Certain faults within our system
Then it's served a useful plan,
And together we can take a stand
And create a perfect organization
Before we're all receiving pension.

OF IN-HOUSE EDUCATIONAL PROGRAMMES

In Sid's halls of learning we gathered
Eight others and myself
We dusted off our thinking caps
And moved them from the shelf.

For six strained weeks we sat around
With learning our objective
But management's taken Hydrography 11
In quite another perspective.

They're putting up their stumbling blocks
As fast as we can jump them
But never fear the CHA
Will find a way to stump them.

The CHA's behind us boys
Never fear of that
Until we fail Step 11 that is.
I think I smell a rat.

Eights and sevens and fours we sit
And put up with the system
Why can't Doc Collin see what's wrong
In all his wisdom.

In Sid's halls of learning we gathered
And wrote the eight exams
Eight others and myself
Are past giving a damn.

But what about the others
Who do it all next year
What about the others
Who have so much to fear?

TALKING HYDROGRAPHIC

Went up before the appraisal board
They thought my tie was simply horrid
Asked me "Where did you get that?"
"That's nothing, you should see my hat."
No sense of humor - they didn't laugh
They thought 'He's not part of our staff.'

"What did I do the summer before?"
I thought like I never thought before
Then I told them it was neat
To mind the telephone in the heat.
They started writing - took a while
They all looked up - began to smile

They asked what did my future hold
So I stood up and I got bold
Told them one day I'd be chief
With money for the price of beef.
Either my mouth isn't big enough
Or my foot isn't small enough

"What courses are you taking son?"
I answered "Sir, I'm taking none
But every night when I go home
I study music all alone."
They thought it over - wrote somemore
Wondered how I got my 4

Now I find I'm just a name
In someones automation game
Just a number in a file
Up for review once in a while
But--Harvey talked to me today
Christmas can't be far away.

CONCERN

A piece of paper with distinction on it
But you can't do a thing with it
What's long hair got to do with it

To liberalize the hydrographic
One must fight against the traffic
With the chance of ending in the attic

But if the challenge is worth meeting
And the bureaucrats worth beating
I pray ourselves we're not defeating